

REMARKS

I. Status of Claims

Claims 1, 3-4, 8-14 and 17-24 are pending in the application. Claims 1 and 23-24 are the only independent claims. Claims 1 and 3 are currently amended. Claims 23-24 are newly added. Support for the additional claim language can at least be found in paragraph [0053] of the Applicant's specification as published, as well as in FIG. 1. Thus, the Applicant respectfully believes that no new matter is added.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1, 3-4, 8-14 and 17-22 stand rejected under 35 USC 103(a) as being allegedly unpatentable over Schmid (USP 6,080,503) (hereinafter "Schmid").

Claim 11 stands rejected under 35 USC 103(a) as being allegedly unpatentable over Schmid, as applied to claim 1, in view of USPGPUB 2002/0197519 to Einhart (hereinafter "Einhart").

The Applicant respectfully requests reconsideration of these rejections in view of the foregoing amendments and the following remarks.

II. Applicant's Statement of Substance of Examiner Interview

In compliance with M.P.E.P. 713.04, the Applicant provides this Statement of Substance of Interview concerning the interview conducted on January 27, 2009 with Examiner Hodge.

- (A) Exhibits. N/A.
- (B) Claim(s). 1.
- (C) References Discussed. Schmid et al.
- (D) Amendments. Discussed possibly amending claims to include language clarifying that the sealant is made of a material "which does not get dry or become solid."
- (E) Principal arguments of Applicant. Certain embodiments of the present invention differ from "Schmid" in that sealant material does not get dry or become solid. Col. 7, lines 35-40, as well as col. 9, lines 1-3, of Schmid, indicate that the adhesive of Schmid hardens..
- (F) Other matters. None.
- (G) Results. Agreement was not reached.

III. 35 USC 112, second paragraph, Rejection

The Applicant respectfully submits that claim 3 is amended to obviate any perceived ambiguity.

IV. Pending Claims

i. Claim 1

Independent claim 1 stands rejected under 35 USC 103(a) as being allegedly unpatentable over Schmid.

The Applicant respectfully submits that claim 1 is patentable over Schmid at least because it recites, *inter alia*, "...a sealant interposed between the plurality of components which is made of a material which does not get dry or become solid and maintains an initial material state even under an environment where the fuel cell unit is used, the material being selected from a gel material, high viscosity material and pressure-sensitive adhesive material..." and "...wherein the components are bonded via the adhesive force of the sealant only to allow the components to be separated at the sealed portions."

The Applicant respectfully submits that the invention of claim 1 is neither taught nor suggested by Schmid. More specifically, at least one distinction between the invention of claim 1 and Schmid is the material chosen for the sealant. In the invention of claim 1, the sealant is made of a material which maintains an initial material state and the sealant does not get dry or become solid. Thus, the sealant allows the components to be easily separated. For example, as described in paragraph [0053] of the application as published:

[0053] Conventionally, such sealants for fuel cell units are provided by adhesive, O-rings, or the like, which remain solid under an environment where the fuel cell is used. According to the embodiment, however, the sealant 32 is made of a material selected from a gel material, high viscosity material, and pressure-sensitive adhesive material, and maintains its initial material state (i.e., the same material state as when the material has been applied to a module or stack during assembly), rather than getting dry or becoming solid. Thus, using the sealant 32 offers some advantages as follows. First, since the components are bonded via the adhesive force of the sealant 32 only, the

components can be easily separated at the sealed portions thereof.

In contrast, Schmid describes a sealant that consolidates or fully hardens. More particularly, in column 7, lines 34-38, Schmid describes that:

Even if the membrane does protrude it is advantageous to impregnate at least a narrow strip of the porous electrodes with the adhesive. For these embodiments the adhesive bonding agent 50 is generally applied to the MEA, and the MEA 5 is consolidated with the separator plates 11, 12 immediately after the application of adhesive or at least before full hardening of the adhesive. Openings for fluid manifolds may be sealed in the same fashion. (emphasis added)

Also, in contrast to the invention of claim 1, Schmid describes on page 9, lines 1-3 that “[i]n order to promote a long and lasting bond, it may be advantageous to subject the surfaces of the components to be bonded to....” (emphasis added).

The Applicant respectfully submits that it is improper to modify a reference where the reference *teaches away* from the modification. *See e.g., In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Accordingly, the Applicant respectfully submits that Schmid cannot achieve the advantages of the invention of claim 1 because the components of Schmid cannot be easily separated (which in the invention of claim 1 leads to facilitating easier rebuilding and recycling of the fuel cell unit).

In addition, as discussed in *KSR Int’l Co. v. Teleflex, et al.*, No. 04-1350, (U.S. Apr. 30, 2007), the Applicant respectfully submits that it remains necessary to identify the reason why a person of ordinary skill in the art would have been prompted to modify Schmid in the manner as claimed by the Applicant. Obviousness cannot be sustained on mere conclusory statements.

Further, the Applicant respectfully submits that, in the instant case, any conclusion of obviousness that is based on a purported modification of Schmid would be based on improper hindsight reasoning. The Applicant respectfully submits that it is not proper to use hindsight to pick features of references without providing any reason in the prior art itself for making the alleged combination. *See KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). That is, it is not proper under 35 U.S.C. § 103 to use Applicant’s invention as a blueprint to pick and choose unrelated features of unrelated references to reproduce, in hindsight, Applicant’s invention.

Therefore, the Applicant respectfully submits that, for at least these reasons, claim 1 and its dependent claims are patentable over Schmid and the cited references.

ii. Claim 23

The Applicant respectfully submits that claim 23 is patentable over Schmid at least because it recites, *inter alia*, "...a sealant interposed between the plurality of components which is made of a **gel** material which does not get dry or become solid and maintains an initial material state even under an environment where the fuel cell unit is used ..." and "...wherein the components are bonded via the adhesive force of the sealant only to allow the components to be separated at the sealed portions."

It is respectfully submitted that, as acknowledged by the Examiner in the interview, Schmid does not describe a gel material. Thus, without waiving any argument, and to facilitate prosecution, newly added claim 23 does not include the language "the material being selected from a gel material, high viscosity material, and pressure sensitive adhesive material¹," but instead recites only the gel material. Accordingly, it is respectfully submitted that the rejection relying on Schmid, which the Office Action cites for describing an adhesive, should be withdrawn.

Accordingly, the Applicant respectfully submits that claim 23 is patentable over the Schmid.

iii. Claim 24

The Applicant respectfully submits that independent claim 24 is patentable over Schmid at least because it recites, *inter alia*, "...a first retaining portion which is formed on a surface of at least one of the plurality of components...", "...a second retaining portion, facing the first retaining portion, which is formed on a surface of at least another one of the plurality of components...", and "...wherein a first portion of the sealant is arranged in a gap formed between opposing faces of the retaining portions such that the retaining portions prevent the sealant from moving, and another portion of the sealant is located outside the gap such that second faces of the retaining portions prevent the sealant from being blown off due to internal

¹ The Applicant notes that the gel material can be highly viscous and pressure-sensitive.

pressure applied thereto from fluids....”

Without waiving any argument, and to facilitate prosecution, claim 24 is added to further distinguish the retaining portions of certain embodiments of the present invention from Schmid. As stated in paragraph [0053] of the Applicant’s specification as published, “[r]etained by the retaining portions 33, the sealant 32 is prevented from moving relative to the component, or being blown off due to internal pressure applied to the sealant 32 from fluids.” *See* also, for example, FIG. 1 of the Applicant’s drawings. Thus, in contrast to the contentions of the Office Action on page 5, the Applicant has demonstrated that the shape and arrangement of the retaining portions of the invention of claim 24, which are not described in Schmid, are indeed critical.

Therefore, the Applicant respectfully submits that claim 24 is patentable over Schmid.

V. Conclusion

In light of the above discussion, the Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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By: /Daniel G. Shanley/
Daniel G. Shanley
(Reg. No. 54,863)

KENYON & KENYON LLP
1500 K Street, N.W.
Washington, D.C. 20005
Telephone: (202) 220-4200
Facsimile: (202) 220-4201
Customer No. 23838